

ABSTRACT

A gyro sensor 10 having a small and simple structure and yet being capable of detecting changes in angular speed with high sensitivity. The sensor 10 includes a giant magnetostrictive member 12 made of a giant magnetostrictive element, a drive coil 18 for vibrating the giant magnetostrictive member 12 by controlling the intensity of a magnetic field applied to the giant magnetostrictive member, and a GMR element (detecting means) 20 for detecting changes in magnetic permeability or remnant magnetization of the giant magnetostrictive member 12. Changes in angular speed around a rotation axis that is orthogonal to a direction in which the giant magnetostrictive member 12 vibrates are detected as the changes in magnetic permeability or remnant magnetization of the giant magnetostrictive member 12 caused by its deformation, which is brought about by the Coriolis force.